

WHAT IS CLAIMED IS

1. A frozen concentrated liquid whole egg having not more than about 67 weight percent water.

2. The frozen concentrated liquid egg as recited in claim 1, wherein the frozen concentrated liquid egg has from about 33% to about 49% solids and a viscosity at about 40°F after thawing of from about 1,000 to about 5,000 cps.

3. The frozen concentrated liquid egg as recited in claim 1 wherein the frozen concentrated liquid egg has a temperature of from about -10°F to about 10°F.

4. The frozen concentrated liquid egg product as recited in claim 1, wherein after thawing the concentrated liquid whole egg product has less than about 1000 plate count per gram of concentrated egg, less than about 10 E. coli and coliforms per gram of concentrated egg, negative salmonellae and negative listeria.

5. A method of making a frozen concentrated liquid whole egg, the method comprising:

heating the liquid whole egg for a time and temperature which are effective for not coagulating the egg and which are effective for removing water from the egg to provide a concentrated liquid whole egg having not more than about 67 weight percent water; and

freezing the concentrated liquid whole egg to provide a frozen concentrated liquid whole egg.

6. The method as recited in claim 5, wherein the egg is

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pasturized before or after concentration.

7. The method as recited in claims 5 or 6, wherein the concentrated liquid whole egg is frozen at a temperature of from about 10°F to about -10°F to provide the frozen concentrated liquid whole egg.

8. A method of making a frozen concentrated liquid whole egg, the method comprising:

heating liquid whole egg for a time and temperature which are effective for removing water from the liquid whole egg such that the egg will have from about 33% to about 49 weight percent solids, from about 51 to about 67 weight percent water, and a viscosity at about 40°F of from about 1,000 to about 5,000 cps to provide a concentrated liquid whole egg; and

freezing the concentrated liquid whole egg to provide a frozen concentrated liquid whole egg.

9. The method as recited in claim 8, wherein the liquid whole egg is heated for about 24 seconds to about 30 seconds at a temperature of from about 105°F to about 130°F.

10. The method as recited in claim 9, wherein the concentrated liquid whole egg is frozen at a temperature of from about -10°F to about 10°F to provide the frozen concentrated liquid whole egg.

11. The method as recited in claims 8, 9 or 10, wherein the egg is pasturized before or after concentration.

12. A method of making a frozen concentrated liquid whole egg, the method comprising:

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heating liquid whole egg for a time and temperature which are effective for not coagulating the egg and which are effective for removing water from the liquid whole egg such that the egg will be concentrated from about 1.5 to about 2.1 times to provide a concentrated liquid whole egg; and

freezing the concentrated liquid whole egg to provide a frozen concentrated liquid whole egg.

13. The method as recited in claim 12, wherein the concentrated liquid whole egg is frozen at a temperature of from about -10°F to about 10°F to provide the frozen concentrated liquid whole egg.

14. The method as recited in claim 12, wherein the liquid whole egg is heated for about 24 seconds to about 30 seconds at a temperature of from about 105°F to about 130°F.

15. The method as recited in claims 12, 13 or 14, wherein the egg is pasturized before or after concentration.

16. The method as recited in claims 12, 13 or 14, wherein the egg is concentrated to a solids level of from about 33 to about 49 weight percent and a viscosity at about 40°F after thawing of from about 1,000 to about 5,000 cps.

17. A frozen concentrated liquid whole egg which is made from liquid whole egg by

heating the liquid whole egg for a time and temperature which are effective for not coagulating the egg and which are effective for removing water from the liquid whole egg such that the egg will be concentrated from about 1.5 to about 2.1 times to provide a concentrated liquid whole egg; and

freezing the concentrated liquid whole egg to provide the frozen concentrated liquid whole egg.

18. The frozen concentrated liquid whole egg as recited in claim 17 wherein the concentrated egg is frozen at a temperature of from about -10°F to about 10°F.

19. The frozen concentrated liquid whole egg as recited in claims 17 or 18, wherein the egg has less than about 1000 plate count per gram of concentrated product, less than about 10 E. coli and coliforms per gram of concentrated product, negative salmonellae and negative listeria.

20. A frozen concentrated liquid whole egg which is made from liquid whole egg by

heating liquid whole egg for a time and temperature which are effective for removing water from the liquid whole egg such that the egg will have from about 33% to about 50 weight percent solids, from about 51 to about 67 weight percent water and a viscosity at about 40°F of from about 1,000 to about 5,000 cps to provide a concentrated liquid whole egg; and

freezing the concentrated liquid whole egg to provide the frozen concentrated liquid whole egg.

21. The frozen concentrated liquid whole egg as recited in claim 20, wherein the concentrated liquid whole egg is frozen at a temperature of from about -10°F to about 10°F.

22. The frozen concentrated liquid whole egg as recited in claims 20 or 21, wherein after thawing the concentrated liquid whole egg has less than about 1000 plate count per gram of concentrated egg, less than about 10 E. coli and coliforms per

gram of concentrated egg, negative salmonellae and negative listeria.

23. A frozen concentrated liquid whole egg which is made from liquid whole egg by

passing a film of liquid whole egg over the surface of a plate evaporator to heat the liquid whole egg for a time and temperature which are effective for not coagulating the egg and which are effective for removing water from the liquid whole egg such that the egg will have from about 33% to about 49 weight percent solids, from about 51 to about 67 weight percent water, and a viscosity at about 40°F of from about 1,000 to about 5,000 cps to provide a concentrated liquid whole egg; and

freezing the concentrated liquid whole egg to provide a frozen concentrated liquid whole egg.

24. The frozen concentrated liquid whole egg as recited in claim 23, wherein the liquid whole egg is heated for about 24 to about 30 seconds at a temperature of not more than about 130°F.

25. The frozen concentrated liquid whole egg as recited in claim 23, wherein the concentrated liquid whole egg is frozen at a temperature of from about -10°F to about 10°F to provide the frozen concentrated liquid whole egg.

26. The frozen concentrated liquid whole egg as recited in claims 23 or 24, wherein after thawing the concentrated liquid whole egg product has less than about 1000 plate count per gram of concentrated egg, less than about 10 E. coli and coliforms per gram of concentrated egg, negative salmonellae and negative listeria.

27. The frozen concentrated liquid whole egg as recited in

claim 24, wherein the egg is pre-heated to a temperature of at least 130°F before the egg is passed over the plate heat evaporator.

28. A method of making a frozen concentrated liquid whole egg, the method comprising:

passing a film of liquid whole egg over the surface of a plate evaporator to heat the liquid whole egg for a time and temperature which are effective for removing water from the liquid whole egg such that the egg will have from about 33% to about 49 weight percent solids, from about 51 to about 67 weight percent water, and a viscosity at about 40°F of from about 1,000 to about 5,000 cps to provide a concentrated liquid whole egg; and

freezing the concentrated liquid whole egg to provide a frozen concentrated liquid whole egg.

29. The method as recited in claim 28, wherein the liquid whole egg is heated for about 24 to about 30 seconds at a temperature of not more than about 130°F. by passing the liquid egg through a plate heat evaporator more than one time.

30. The method as recited in claim 28, wherein the concentrated liquid whole egg is frozen at a temperature of from about -10°F to about 10°F to provide the frozen concentrated liquid whole egg.

31. The method as recited in claims 28 or 29, wherein after thawing the concentrated liquid whole egg product has less than about 1000 plate count per gram of concentrated egg, less than about 10 E. coli and coliforms per gram of concentrated egg, negative salmonellae and negative listeria.

32. The method as recited in claims 28, 29, or 30, wherein the egg is pre-heated to a temperature of at least 130°F before the egg is passed through the plate heat evaporator.

33. A frozen concentrated liquid whole egg having not more than about 51 weight percent water and a viscosity of not more than about 5000 cps at about 40°F.

34. The frozen concentrated liquid egg product as recited in claim 33, wherein after thawing the concentrated liquid whole egg product has less than about 1000 plate count per gram of concentrated product, less than about 10 E. coli and coliforms per gram of concentrated product, negative salmonellae and negative listeria.

35. A frozen concentrated liquid whole egg having a mean particle size after thawing of not more than about 11 microns and from about 33% to about 49% solids.

36. The frozen concentrated liquid egg product as recited in claim 35, wherein after thawing the concentrated liquid whole egg product has less than about 1000 plate count per gram of concentrated product, less than about 10 E. coli and coliforms per gram of concentrated product, negative salmonellae and negative listeria.

37. The frozen concentrated liquid egg product as recited in claim 35, wherein after thawing the concentrated liquid whole egg product has a viscosity at about 40°F of from about 1,000 to about 5,000 cps.

38. A frozen concentrated liquid whole egg having a mean

particle size after thawing of not more than about 11 microns and from about 33% to about 49% solids, less than about 1000 plate count per gram of concentrated product, less than about 10 E. coli and coliforms per gram of concentrated product, negative salmonellae and negative listeria and after thawing a viscosity at about 40°F of from about 1,000 to about 5,000 cps.

39. The frozen concentrated whole egg as recited in claims 1, 2, 3 or 4 wherein concentrated egg does not have more than about 51 weight percent water.

40. The method as recited in claims 5 or 6 wherein the concentrated egg has from about 67 weight percent to about 51 weight percent water.